

### AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

#### Listing of Claims

Claim 1 (Currently Amended): An isolated nucleic acid molecule for a salt-tolerant L-myo-inositol 1-phosphate synthase from *Porteresia coarctata* (PINO1) comprising the nucleic acid sequence of SEQ ID 1, a nucleic sequence encoding protein comprising SEQ ID 3, a nucleic acid sequence having at least 70% homology to SEQ ID 1 or a nucleic acid sequence having at least 70% homology to the nucleic acid sequence encoding the protein comprising the amino acid sequence of SEQ ID 3. ~~nucleotide sequences and the a deduced amino acid sequence as given below:~~

#### **A. Nucleotide and deduced amino acid sequence of PINO1:**

~~atg ttc atc gag age ttc cgc gtg gag age cgc cac gtg cgg tac ggc gcg gcg gag ate~~  
~~M F I E S F R V E S P H V R Y G A A E I~~  
~~gag teg gag tac cgg tac gac aet acg gag ctg gtg cac gag age cac gac ggc gee teg~~  
~~E S W Y R Y D T T E L V H E S H D G A S~~  
~~cgc tgg gtc gtc cgc ccc aag tcc gtc cag tac cac ttc agg acc age acc acc gtc ccc~~  
~~R H V V R P K S V Q Y H F R T S T T V P~~  
~~aag ctc ggg gtc atg ctc gtg ggg tgg ggc ggc aac aac ggc tea acg ctg acg get ggg~~  
~~K L G V M L V G W G G N H G S T L T A G~~  
~~gtc ate gcc age agg gag gga ate tea tgg gcg acc aag gac aag gtg cag caa gcc aac~~  
~~V I A S R E G I S W A T K D K V Q Q A N~~  
~~tac tat ggc tea ctc acc cag gcg tcc acc atc agg gta gga age tac aac ggg gag gag~~  
~~Y Y G S L T Q A S T I R V G S Y N G E E~~  
~~ate tac gcg cct ttc aag age ctc ctg ccc atg gtg aac cct gat gac ctt gtg ttc ggg~~  
~~I Y A P F K S L L P M V N P D D L V F G~~  
~~ggc tgg gac att age aac atg aac ctg get gat get atg acc agg gcc aag gtg ctg gac~~  
~~G W D I S N M N L A D A M T R A K V L D~~  
~~att gat ctg cag aag cag ctt agg cct tac atg gag tcc tgg tgc ctc tcc ctg gea tet~~  
~~I D L Q K Q L R P Y M E S W C L A L A S~~



atg ate ceg aet tea teg ceg eta ace agg gat eee geg ega aca atg tea tea agg gaa  
~~M I P T S S P L T R D P A R T M S S R E~~  
eea aga agg age aga tgg gge aga tea tea aag gac ate agg gag tte aag gaa aat aae  
~~P R R S R W G R S S K D I R E F K E N N~~  
aaa atg gac aag geg gtg gtg ttg tgg act gea aac act gaa agg tac aac aat tgt etg  
~~K M D K A V V L N T A N T E R Y N N C L~~  
tgt ttg gge tta atg ace aat gga aaa eet tet geg tet gtg gac agg aac cag geg gag  
~~C L G L M T N G K P S A S V D R S Q A E~~  
ata teg eca teg aca ttg tat tge cat tge ett get tea ttg gag ggt gte egt tea ata  
~~I S P S T L Y C H C L A S L E G V R S I~~  
aeg gga gee ett aaa aaa aaa tet tgg eet gga att gae gat ett gee att aaa aaa aaa  
~~T G A L K K K S W P G I D D L A I K K K~~  
etg eet gat ceg ggg gga tta att caa aaa agg gge aaa eca aaa aaa aaa ace gge ttg  
~~L P D P G G L I Q K R G K P K K K T G L~~  
gtt gat tte ete atg ggt get gga ata aag eee ace tea att gte agt tac aac eac ttg  
~~V D F L M G A G I K P T S I V S Y N H L~~  
ggg aat aat gat gge aeg aac ett tet geg ceg caa aca tte ega tee aag gag ate tee  
~~G N N D G T N L S A P Q T F R S K E I S~~  
aaa age age gtg gte gat gae atg gte tea age aat get ate ete tac gag eet gge gag  
~~K S S V V D D M V S S N A I L Y E P G E~~  
eat eet gat cat gtt gte gtg att aag tat gtg ceg tac gte gga gae age aag agg gee  
~~H P D H V V V I K Y V O Y V G D S K R A~~  
atg gat gag tac ace tea gag ate tte atg ggg ggt aag aac ace ate gtg etg eac aac  
~~M D E Y T S E I F M G G K M T I V L H N~~  
ace tge gag gae teg ete ett get gea eca ate att ett gae etg gtg ete etg gee gag  
~~T C E D S L L A A P I I L D L V L L A E~~  
ete age act agg att cag etg aaa gge gag gga gag gag aaa tte eat tee tte eat eea  
~~L S T R I Q L K G E G E E K F H S F H P~~  
gtg get ace ate etg age tac ete ace aag geg eee ett gtt eet eet gge aca eca gtg  
~~V A T I L S Y L T K A P L V P P G T P V~~  
gtg aac gee etg geg aag eag agg get atg ete gag aac ate atg agg gee tge gtt ggg  
~~V N A L A K Q R A M L E N I M R A C V G~~



~~etg gee ect gag aac aac atg ate etg gag tae aag~~  
~~L A P E N N M I L E Y K.~~

Claim 2 (Cancelled)

Claim 3 (Currently Amended): A process of obtaining cDNA, encoding a salt-tolerant L-myo-inositol 1-phosphate synthase comprising:

- (i) isolation of a full-length cDNA for the L-myo-inositol 1-phosphate synthase gene from the leaf of *Porteresia coarctata* *Porteresia coarctata* by reverse transcription followed by polymerase chain reaction; and
- (ii) sequenceing of the isolated L-myo-inositol 1-phosphate synthase gene, wherein the sequenced synthase from *Porteresia coarctata* (PINO1) is encoded by a nucleotide sequence (SEQ ID 1) and a deduced amino acid sequence (SEQ ID 3).

Claim 4 (Previously Presented): The process as claimed in claim 3, wherein the isolated full-length cDNA of PINO1 is cloned into a suitable bacterial expression vector pET 20B(+) to produce expression plasmids.

Claim 5 (Previously Presented): The process as claimed in claim 4, wherein said plasmids are introduced into the host strain *E. coli* BL-21 (DE 3) for obtaining an expressed PINO1 gene product.

Claim 6 (Previously Presented): The process as claimed in claim 5, wherein the expressed PINO1 proteins are solubilized in a solubilization buffer containing 8M Urea, 0.5 M NaCl, 20 mM Tris-HCl, pH 7.5, 10 mM ME and 2 mM PMSF.

Claim 7 (New): A plasmid comprising the isolated nucleic acid molecule of claim 1.

Claim 8 (New): A bacteria comprising the isolated nucleic acid molecule of claim 1.